KAC-53

KitchenAid

TECHNICAL EDUCATION

30” and 36” Retractable Downdraft Vent Systems

JOB AID
Part No. 4317446

FORWARD

This Job Aid will introduce the technician to the KitchenAid Retractable Downdraft Vent system. This Job Aid is a reference guide for the experienced technician. It is not designed as a replacement to basic training. This Job Aid does not replace the Service Manual or Use and Care Guide. It is designed to be used in conjunction with these manuals.

GOALS AND OBJECTIVES

The objective of this Job Aid is to have the experienced appliance technician become familiar with the operation and service of the KitchenAid Retractable Downdraft Vent System. It is designed as reference material and is not a replacement for basic training.

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GENERAL

VENT SYSTEM SAFETY

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.

This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word “DANGER” or “WARNING.” These words mean:

⚠ DANGER — You can be killed or seriously injured if you don't immediately follow instructions.

⚠ WARNING — You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
- When cutting or drilling into wall or ceiling; do not damage electrical wiring and other utilities.
- Ducted fans must always be vented outdoors.

  CAUTION: For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.

  CAUTION: To reduce risk of fire and to properly exhaust air, be sure to duct air outside - do not vent exhaust air into spaces within walls or ceilings, attics or into crawl spaces, or garages.

WARNING: TO REDUCE THE RISK OF FIRE, USE ONLY METAL DUCTWORK.

WARNING: TO REDUCE THE RISK OF A RANGE TOP GREASE FIRE:

- Never leave surface units unattended at high settings. Boilovers cause smoking and greasy spillovers that may ignite. Heat oils slowly on low or medium settings.
- Always turn hood ON when cooking at high heat or when flambeing food (i.e. Crepes Suzette, Cherries Jubilee, Peppercorn Beef Flambé).
- Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
- Use proper pan size. Always use cookware appropriate for the size of the surface element.

WARNING: TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE TOP GREASE FIRE, OBSERVE THE FOLLOWING:[a]

- SMOTHER FLAMES with a close fitting lid, cookie sheet, or metal tray, then turn off the burner. BE CAREFUL TO PREVENT BURNS. If the flames do not go out immediately, EVACUATE AND CALL THE FIRE DEPARTMENT.
- NEVER PICK UP A FLAMING PAN - you may be burned.
- DO NOT USE WATER, including wet dishcloths or towels - a violent steam explosion will result.
- Use an extinguisher ONLY if:
  - – You know you have a class ABC extinguisher, and you already know how to operate it.
  - – The fire is small and contained in the area where it started.
  - – The fire department is being called.
  - – You can fight the fire with your back to an exit.

[a]Based on "Kitchen Fire Safety Tips" published by NFPA.

SAVE THESE INSTRUCTIONS

MODEL & SERIAL NUMBER LABEL AND WIRING DIAGRAM LOCATIONS

The Model/Serial Number label and Wiring Diagram locations are shown below.

Front (Blower Side)

Back

SPECIFICATIONS

Models: UXHR1300VDS, UXHR1360VDS, KIRD801VSS

Model Number	UXHR1300VDS	UXHR1360VDS	KIRD801VSS
Colors	Stainless Optional Black Trim available	Stainless Optional Black Trim available	Stainless Optional Black Trim available
Model Description	Whirlpool/Maytag 30" Interior Blower	Whirlpool/Maytag 36" Interior Blower	KitchenAid 30" Interior Blower
Size-Configuration	30 " Retractable Downdraft	36 " Retractable Downdraft	30 " Retractable Downdraft
DIMENSIONS / SPECIFICATIONS			
Exterior Dimensions W x H x D (inches) Base/Canopy	Base Depth 2 1/8"	Base Depth 2 1/8"	Base Depth 2 1/8"
Downdraft Plenum Height Extended	12"	12"	14"
Approx. Net Weight -kg	24.5	26	24.5
Approx. Net Weight - Lb	54	57	54
ELECTRICAL SPECIFICATIONS			
Ratings			
Electric Voltage/Phase/Frequency (Hz)	120 volt, single phase 60 hertz	120 volt, single phase 60 hertz	120 volt, single phase 60 hertz
120v AC	Yes	Yes	Yes
Circuit Amps	15	15	15
Domestic Use Only	Yes	Yes	Yes
Agency Approvals	UL, CUL	UL, CUL	UL, CUL
VENTILATION CONTROL SYSTEM			
Electronic	Yes	Yes	Yes
Slider	Fan Operation	Fan Operation	Fan Operation
Push Button	Open/Close	Open/Close	Open/Close
Variable Speed	Yes	Yes	Yes
Auto Time Out	No	No	No
Auto "OFF"	Yes	Yes	Yes
Display Type	Power "ON" Light	Power "ON" Light	Power "ON" Light
OTHER FEATURES			
Heat Lamps	No	No	No
Count Down Timer	No	No	No
Exhaust Fan	Yes	Yes	Yes
Number of Speeds	Variable	Variable	Variable
Manual Off	Yes	Yes	Yes
Auto Off	Yes	Yes	Yes
VENTILATION SYSTEM			
Downdraft	Yes-Retractable	Yes-Retractable	Yes-Retractable
Interior Blower	Yes	Yes	Yes
Exterior Blower	No	No	No
Reversible Blower Capability	Yes	Yes	Yes
Exhaust CFM Out @each Speed Horizontal	600	600	600
Exhaust Damper Assembly	Yes	Yes	Yes
Round	Yes 6"	Yes 6"	Yes 6"

SPECIFICATIONS (continued)

Models: UXHR1300VDS, UXHR1360VDS, KIRD801VSS

Model Number	UXHR1300VDS	UXHR1360VDS	KIRD801VSS
Grease Filter	Yes-Aluminum Dishwasher Safe	Yes-Aluminum Dishwasher Safe	Yes-Aluminum Dishwasher Safe
Cooling Fan	No	No	No
CONSTRUCTION FEATURES			
Hood/Ventilation System Exterior	Stainless	Stainless	Stainless
Type/Configuration	Retractable Downdraft	Retractable Downdraft	Retractable Downdraft
Size (Inches)	30"	36"	30"
Downdraft Intake Cover Material	Stainless	Stainless	Stainless
Downdraft Intake Cover Styling	Ubranded	Ubranded	Ubranded
EXTERIOR FEATURES			
Exterior Material	Galvanized	Galvanized	Galvanized
Construction	Galvanized	Galvanized	Galvanized
APPROVED ACCESSORY ITEMS			
Top /Front Trim	Yes-Black Optional	Yes-Black Optional	Yes-Black Optional
Hardware for Installation	Yes	Yes	Yes
LITERATURE			
Use & Care Guide	Part of Installation Instructions	Part of Installation Instructions	Part of Installation Instructions
Installation Instructions	Yes	Yes	Yes
Service Manual	4317446	4317446	4317446
Wiring Diagram	Yes	Yes	Yes
Warranty			
Full (Months)	12	12	12
Cooktop Approvals	All Whirlpool Corp. 30" and 36" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included	All Whirlpool Corp. 30" and 36" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included	All Whirlpool Corp. 30", 36"and 48" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included

SPECIFICATIONS (continued)

Models: KIRD802VSS, KIRD861VSS, KIRD862VSS

Model Number	KIRD802VSS	KIRD861VSS	KIRD862VSS
Colors	Stainless Optional Black Trim available	Stainless Optional Black Trim available	Stainless Optional Black Trim available
Model Description	KitchenAid 30" Exterior Blower	KitchenAid 36" Interior Blower	KitchenAid 36" Exterior Blower
Size-Configuration	36 " Retractable Downdraft	36 " Retractable Downdraft	36 " Retractable Downdraft
DIMENSIONS / SPECIFICATIONS			
Exterior Dimensions W x H x D (inches) Base/Canopy	Base Depth 2 1/8"	Base Depth 2 1/8"	Base Depth 2 1/8"
Downdraft Plenum Height Extended	14"	14"	14"
Approx. Net Weight -kg	17.1	26	18.6
Approx. Net Weight - Lb	37.7	57	41
ELECTRICAL SPECIFICATIONS			
Ratings			
Electric Voltage/Phase/Frequency (Hz)	120 volt, single phase 60 hertz	120 volt, single phase 60 hertz	120 volt, single phase 60 hertz
120v AC	Yes	Yes	Yes
Circuit Amps	15	15	15
Domestic Use Only	Yes	Yes	Yes
Agency Approvals	UL, CUL	UL, CUL	UL, CUL
VENTILATION CONTROL SYSTEM			
Electronic	Yes	Yes	Yes
Slider	Fan Operation	Fan Operation	Fan Operation
Push Button	Open/Close	Open/Close	Open/Close
Variable Speed	Yes	Yes	Yes
Auto Time Out	No	No	No
Auto "OFF"	Yes	Yes	Yes
Display Type	Power "ON" Light	Power "ON" Light	Power "ON" Light
OTHER FEATURES			
Heat Lamps	No	No	No
Count Down Timer	No	No	No
Exhaust Fan	Yes	Yes	Yes
Number of Speeds	Variable	Variable	Variable
Manual Off	Yes	Yes	Yes
Auto Off	Yes	Yes	Yes
VENTILATION SYSTEM			
Downdraft	Yes-Retractable	Yes-Retractable	Yes-Retractable
Interior Blower	Yes	Yes	Yes
Exterior Blower	Yes	No	Yes
Reversible Blower Capability	Yes	Yes	Yes
Exhaust CFM Out @each Speed Horizontal	900	600	900
Exhaust Damper Assembly	Yes	Yes	Yes
Round	Yes 10"	Yes 6"	Yes 6"

SPECIFICATIONS (continued)

Models: KIRD802VSS, KIRD861VSS, KIRD862VSS

Model Number	KIRD802VSS	KIRD861VSS	KIRD862VSS
Grease Filter	Yes-Aluminum Dishwasher Safe	Yes-Aluminum Dishwasher Safe	Yes-Aluminum Dishwasher Safe
Cooling Fan	No	No	No
CONSTRUCTION FEATURES			
Hood/Ventilation System Exterior	Stainless	Stainless	Stainless
Type/Configuration	Retractable Downdraft	Retractable Downdraft	Retractable Downdraft
Size (Inches)	30"	36"	36"
Downdraft Intake Cover Material	Stainless	Stainless	Stainless
Downdraft Intake Cover Styling	Ubranded	Ubranded	Ubranded
EXTERIOR FEATURES			
Exterior Material	Galvanized	Galvanized	Galvanized
Construction	Galvanized	Galvanized	Galvanized
APPROVED ACCESSORY ITEMS			
Top /Front Trim	Yes-Black Optional	Yes-Black Optional	Yes-Black Optional
Hardware for Installation	Yes	Yes	Yes
LITERATURE			
Use & Care Guide	Part of Installation Instructions	Part of Installation Instructions	Part of Installation Instructions
Installation Instructions	Yes	Yes	Yes
Service Manual	4317446	4317446	4317446
Wiring Diagram	Yes	Yes	Yes
Warranty			
Full (Months)	12	12	12
Cooktop Approvals	All Whirlpool Corp. 30", 36"and 48" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included	All Whirlpool Corp. 30", 36"and 48" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included	All Whirlpool Corp. 30", 36"and 48" Traditional Electric and Gas cooktops. Commercial/Professional Cooktops not included

SPECIFICATIONS (continued)

Models: JXDR7301VS, JXDR7361VS

Model Number	JXDR7301VS	JXDR7361VS
Colors	Stainless Optional Black Trim available	Stainless Optional Black Trim available
Model Description	Jenn-Air 30" Interior Blower	Jenn-Air 36" Interior Blower
Size-Configuration	30 " Retractable Downdraft	36 " Retractable Downdraft
DIMENSIONS / SPECIFICATIONS		
Exterior Dimensions W x H x D (inches) Base/Canopy	Base Depth 2 1/8"	Base Depth 2 1/8"
Downdraft Plenum Height Extended	14"	14"
Approx. Net Weight -kg	24.5	26
Approx. Net Weight - Lb	54	57
ELECTRICAL SPECIFICATIONS		
Ratings		
Electric Voltage/Phase/Frequency (Hz)	120 volt, single phase 60 hertz	120 volt, single phase 60 hertz
120v AC	Yes	Yes
Circuit Amps	15	15
Domestic Use Only	Yes	Yes
Agency Approvals	UL, CUL	UL, CUL
VENTILATION CONTROL SYSTEM		
Electronic	Yes	Yes
Slider	Fan Operation	Fan Operation
Push Button	Open/Close	Open/Close
Variable Speed	Yes	Yes
Auto Time Out	No	No
Auto "OFF"	Yes	Yes
Display Type	Power "ON" Light	Power "ON" Light
OTHER FEATURES		
Heat Lamps	No	No
Count Down Timer	No	No
Exhaust Fan	Yes	Yes
Number of Speeds	Variable	Variable
Manual Off	Yes	Yes
Auto Off	Yes	Yes
VENTILATION SYSTEM		
Downdraft	Yes-Retractable	Yes-Retractable
Interior Blower	Yes	Yes
Exterior Blower	No	No
Reversible Blower Capability	Yes	Yes
Exhaust CFM Out @each Speed Horizontal	600	600
Auto ON - High Speed		
Delay Off Timed Auto Off		
Exhaust Damper Assembly	Yes	Yes
Round	Yes 6"	Yes 6"

SPECIFICATIONS (continued)

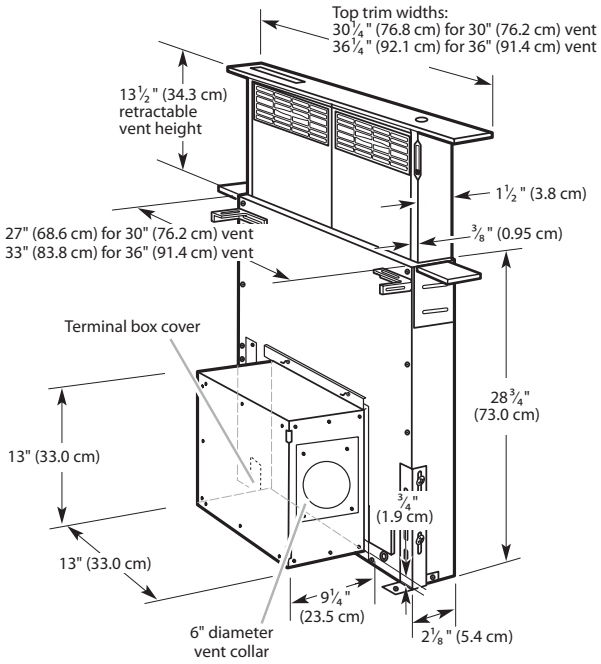
Models: JXDR7301VS, JXDR7361VS

Model Number	JXDR7301VS	JXDR7361VS
Grease Filter	Yes-Aluminum Dishwasher Safe	Yes-Aluminum Dishwasher Safe
Cooling Fan	No	No
CONSTRUCTION FEATURES		
Hood/Ventilation System Exterior	Stainless	Stainless
Type/Configuration	Retractable Downdraft	Retractable Downdraft
Size (Inches)	30"	36"
Downdraft Intake Cover Material	Stainless	Stainless
Downdraft Intake Cover Styling	Ubranded	Ubranded
EXTERIOR FEATURES		
Exterior Material	Galvanized	Galvanized
Construction	Galvanized	Galvanized
APPROVED ACCESSORY ITEMS		
Top /Front Trim	Yes-Black Optional/Oiled Bronze ?	Yes-Black Optional/Oiled Bronze ?
Hardware for Installation	Yes	Yes
LITERATURE		
Use & Care Guide	Part of Installation Instructions	Part of Installation Instructions
Installation Instructions	Yes	Yes
Service Manual	4317446	4317446
Wiring Diagram	Yes	Yes
Warranty		
Full (Months)	12	12

INSTALLATION INFORMATION

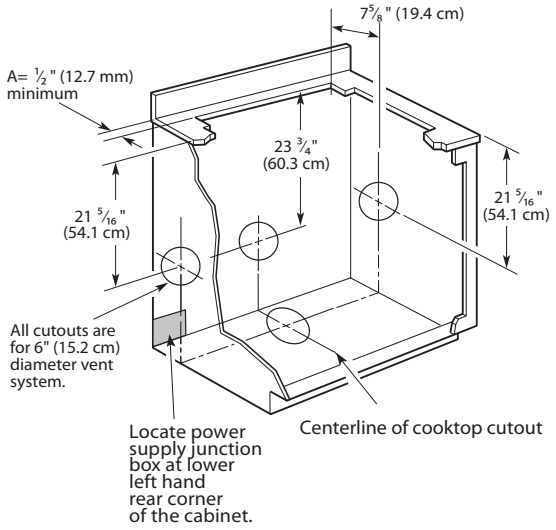
Product Dimensions

Interior-mounted blower motor model



Cabinet Dimensions

Interior-mounted blower motor model



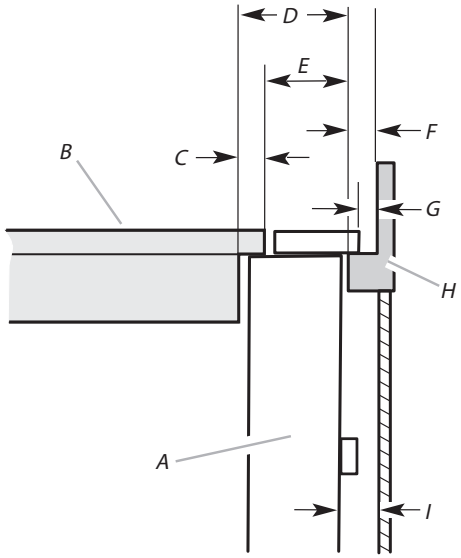
NOTES:

- See cooktop manufacturer's instructions for cooktop cutout depth and width.
- Use dimensions for vent system cutout location that applies to your installation.
- Interior mounted blower system s connect with 6" (15.2 cm) round vent. The cutout locations for this vent system will depend on your specific installation.

Countertop Cutout Dimensions

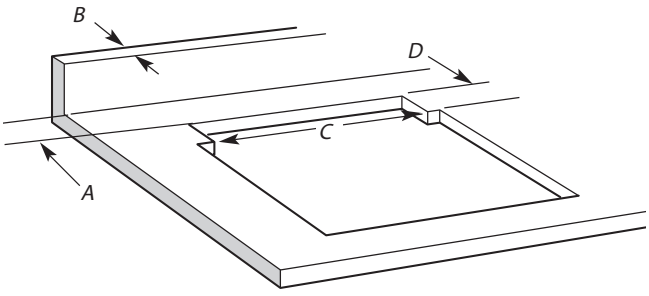
IMPORTANT: Countertops with a bullnosed front edge are not recommended for these installations.

- Some models require a countertop deeper than 25" (63.5 cm); see the following Countertop Cutout Dimensions section.
- To avoid mistakes, it is recommended that the cooktop and vent cutouts be drawn on the countertop before making any cutouts.
- See Cooktop Installation Instructions for complete cutout dimensions, location dimensions and installation details.



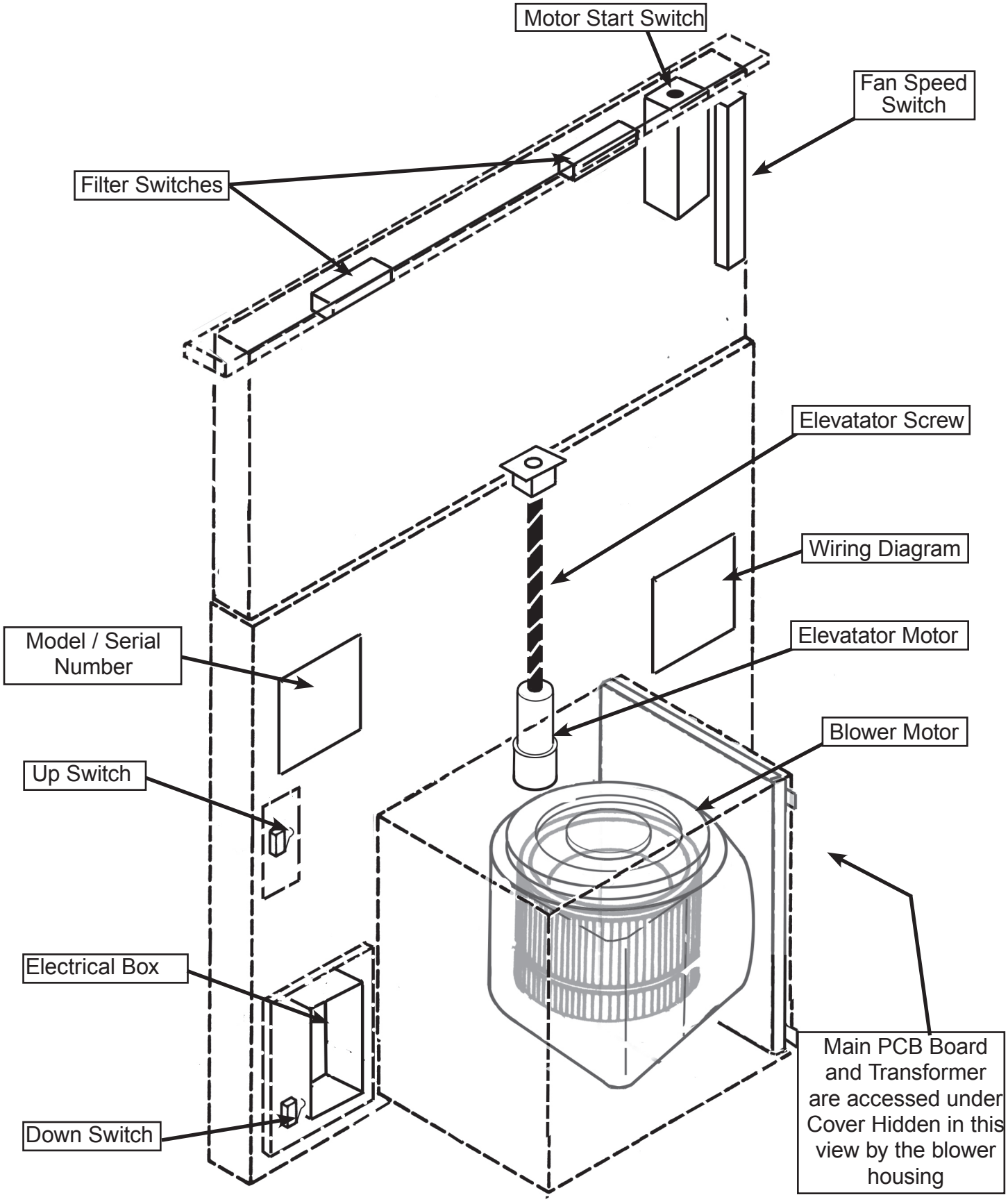
A. Downdraft vent
B. Cooktop
C. Measurement of cooktop rear overhang.
D. D = Measurement of cooktop rear overhang (C) + 1 13/16" [46.2 mm] (E)
E. 1 13/16" (46.2 mm)
F. ½" (12.7 mm) minimum
G. ¼" (6.4 mm) minimum
H. Countertop and backsplash
I. ½" (12.7 mm) minimum

Countertop Cutout Dimensions



A. ½" (12.7 mm) minimum to backsplash or rear wall
B. ¾" (19.1 mm) maximum backsplash depth
C. 27 ½" (69.9 cm) on 30" (76.2 cm) models
33 ½" (85.9 cm) on 36" (91.4 cm) models
D. D = Measurement of cooktop rear overhang + 1 13/16" (46.2 mm)

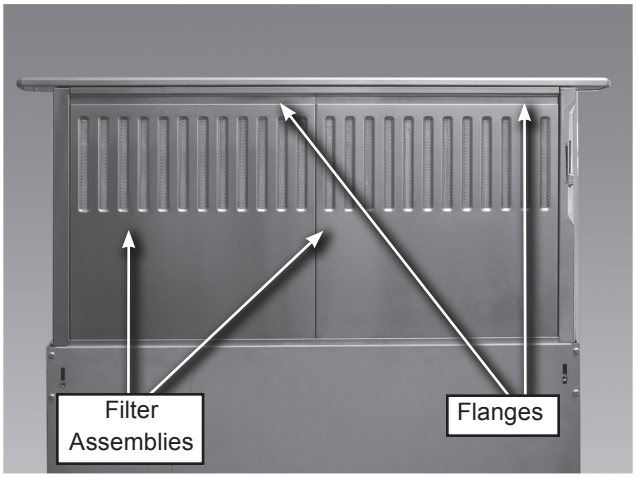
COMPONENT LOCATIONS



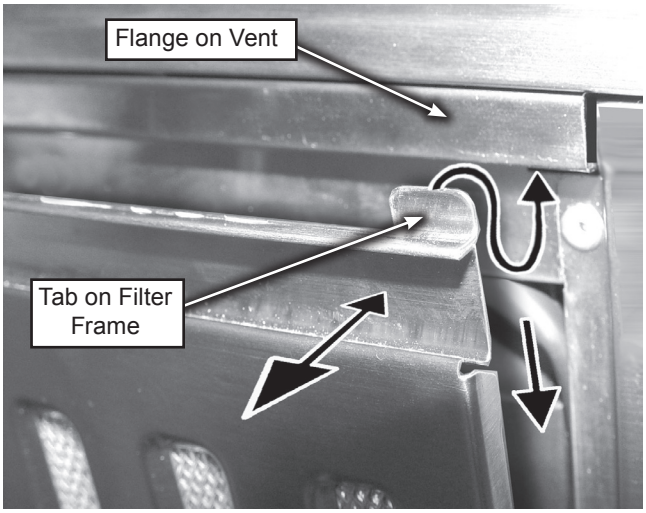
COMPONENT ACCESS

REMOVING / REPLACING THE GREASE FILTER ASSEMBLIES

1. Raise retractable section to the up position.

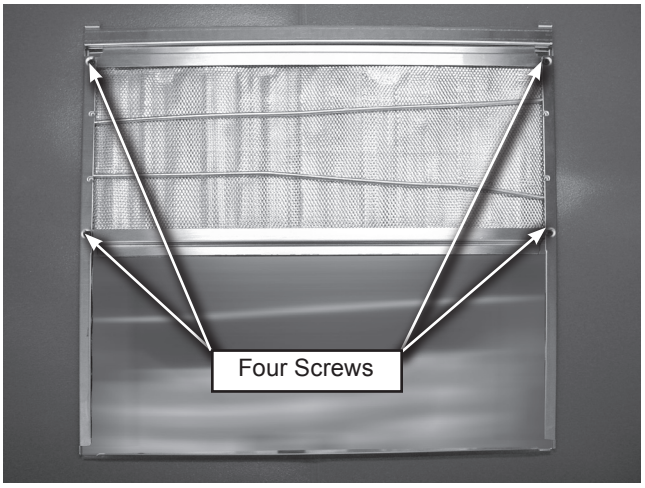


2. Locate the flange at the top edge of each filter. Push straight down with medium pressure on the flange while pulling flange toward you until the tab on each top corner of the filter clears the mating flange on the vent, then lift the filter off.

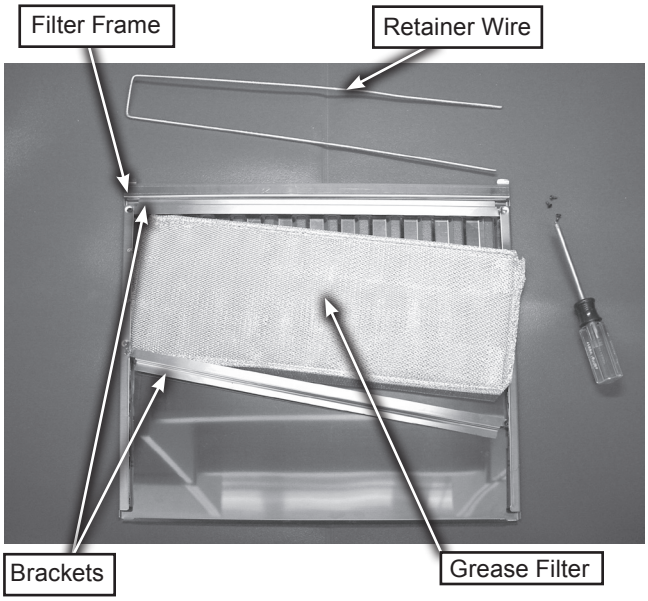


REPLACING GREASE FILTERS

1. Raise retractable section to the up position.
2. Remove filter assembly as outlined in the steps above.
3. Lay filter assembly face down on a on flat covered surface.



4. Remove four screws from two brackets that secures the grease filter.
5. Remove the retainer wire by slightly pulling upward and releasing from under side flanges. If retainer wire is bent, straighten before reassembly.



6. Work the filter free by loosening each side from under the top and bottom brackets.
7. Replace filters and reassemble in reverse order.
8. Reinstall filter assemblies into vent.

REMOVING THE FILTER SWITCH(ES)

1. Raise retractable section to the up position.

⚠ WARNING

Electrical Shock Hazard

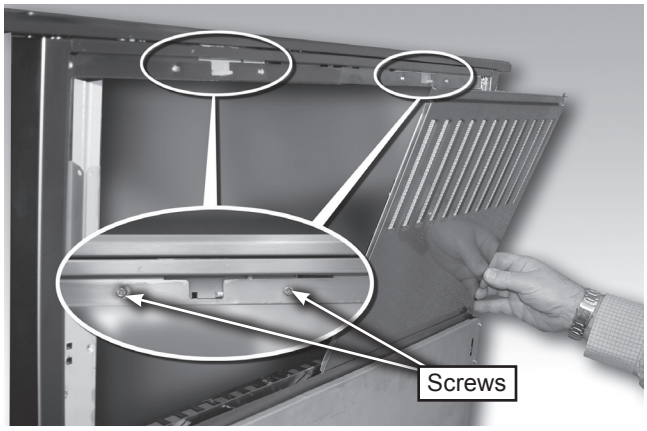
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

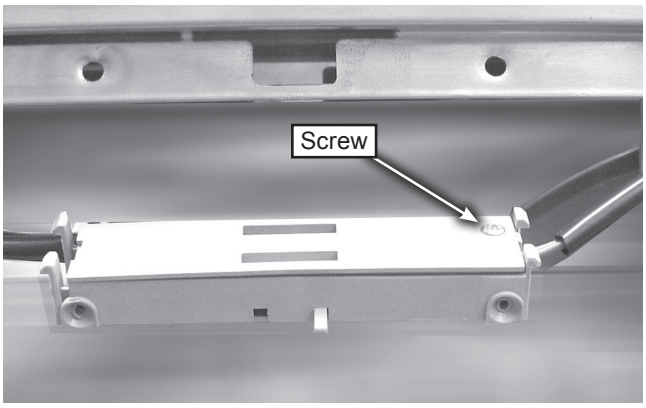
2. Unplug vent or disconnect power.

3. Remove the filters and locate two sets of 2 screws in the vent frame that secure the two filter switches.

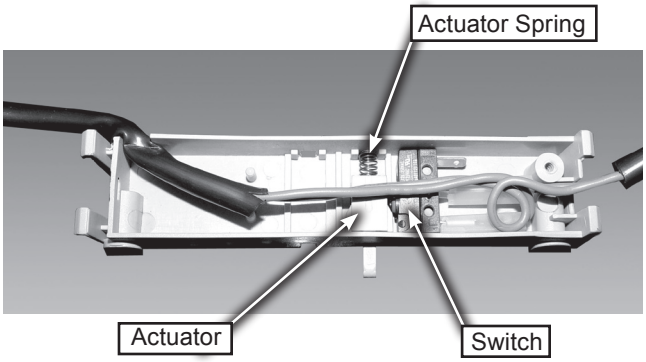


4. Remove the screws that secure the switch being replaced. The switch assembly should be easy to access.

5. Remove one screw securing the cover to the switch case.



With the cover removed the switch can be disconnected and replaced. These parts are available as a kit only.



REMOVING THE MOTOR START SWITCH

1. Raise retractable section to the up position.

⚠ WARNING

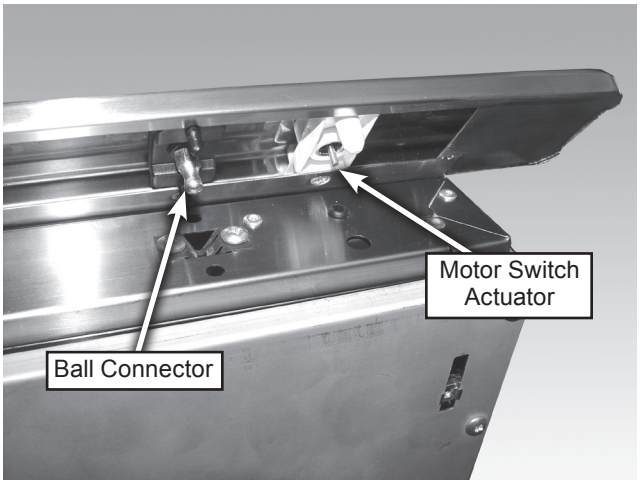
Electrical Shock Hazard

Disconnect power before servicing.

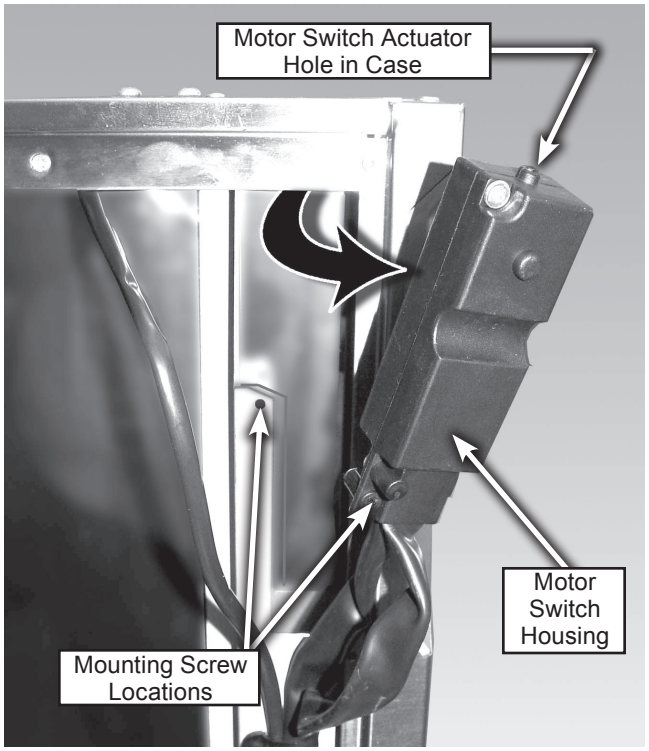
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

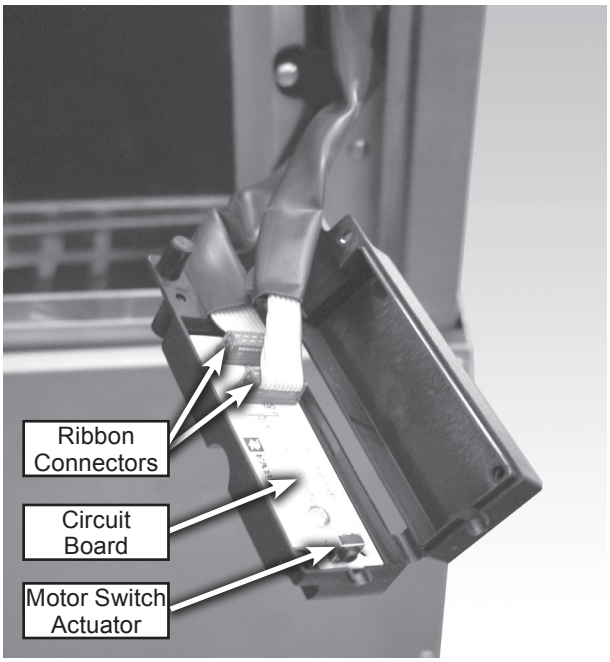
2. Unplug vent or disconnect power.
3. Remove the filters.
4. Pull gently upward on the control cover (trim cap, the piece with the name plate) to disengage the 3 ball connectors from the clips in the vent filter frame.



5. The motor switch housing is tucked behind the upper right filter frame. It is held in place by one screw.
6. Remove the screw and pull the switch housing from behind the frame.



7. The switch housing is held together by two screws, one on the front and one on the back of the housing. Remove the screws to gain access to the connections and circuit board.



8. Reassemble in reverse order of these steps.

REMOVING THE FAN SPEED SWITCH

1. Raise retractable section to the up position.

⚠ WARNING

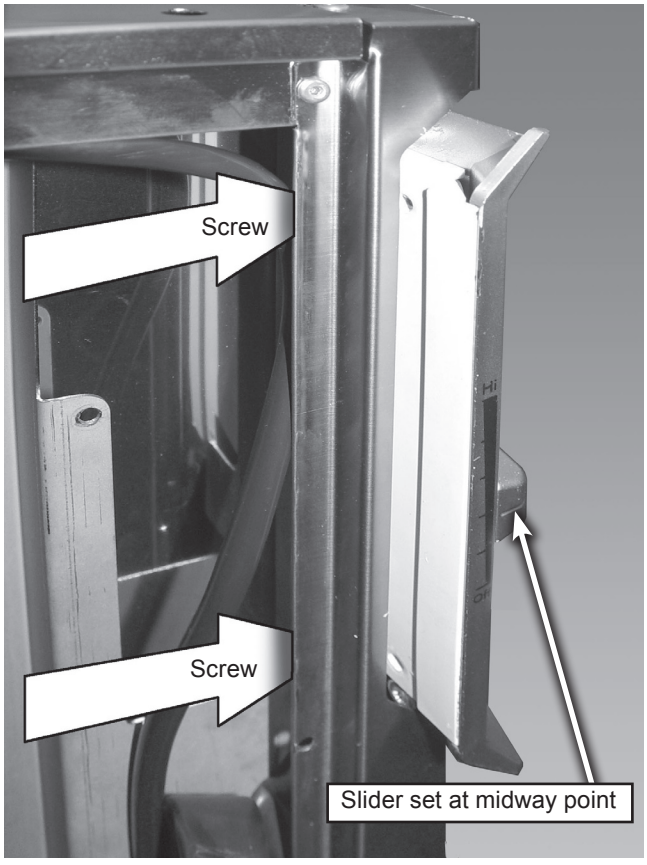
Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

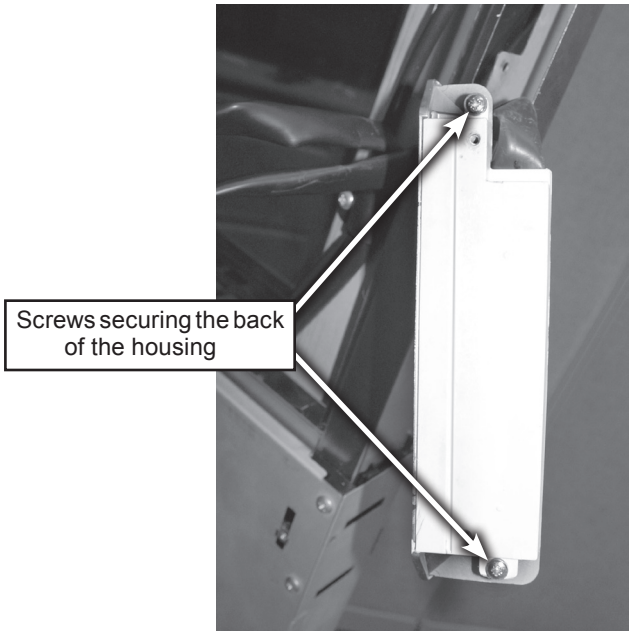
Failure to do so can result in death or electrical shock.

2. Unplug vent or disconnect power.
3. Remove the filters.
4. Find and remove two screws that secure the switch from the inside flange behind the filter frame.

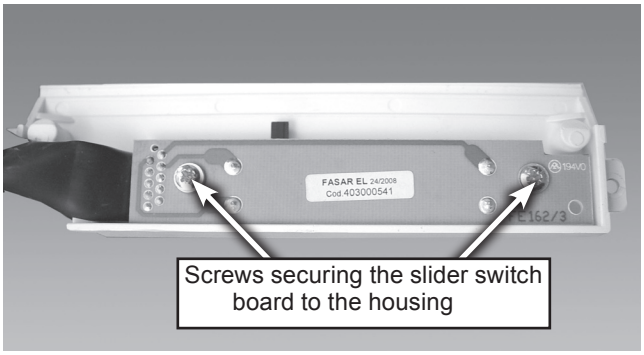


5. Place the slider at a midway point on the switch to avoid it interfering with removing the switch from the frame.
6. Gently push the switch housing from behind and pull straight out.

5. Remove the two screws from the back of the housing.



REMOVING THE FAN SPEED SWITCH (continued)



5. Remove two screws that attaches the circuit board to the switch housing.
6. Disconnect the ribbon connector and replace the board.
7. Reassemble in reverse order of these steps.

COMPLETE UNIT REMOVAL

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. Disconnect power and / or gas supply to cooktop.
2. Remove cooktop from the counter.
3. Disconnect power to the downdraft unit.
4. Remove brackets.
5. Remove unit from cabinet.
6. Reassemble in reverse order of these steps.

BLOWER REMOVAL

⚠ WARNING

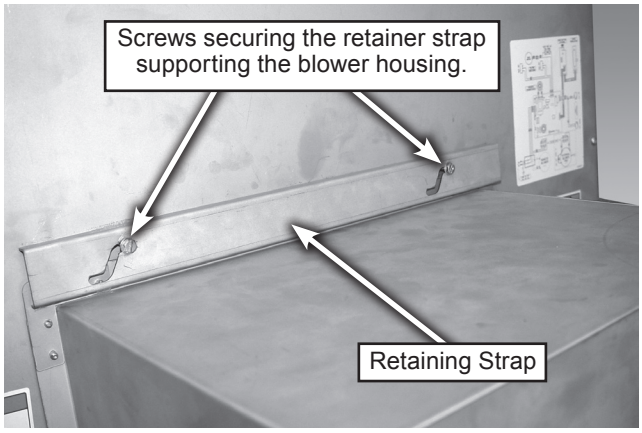
Electrical Shock Hazard

Disconnect power before servicing.

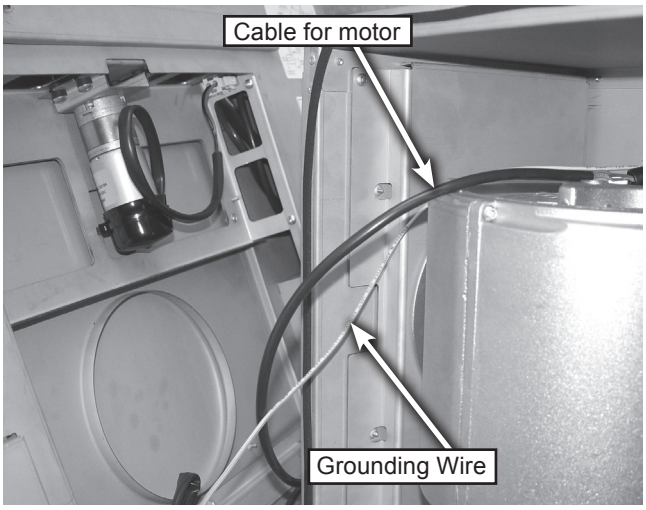
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

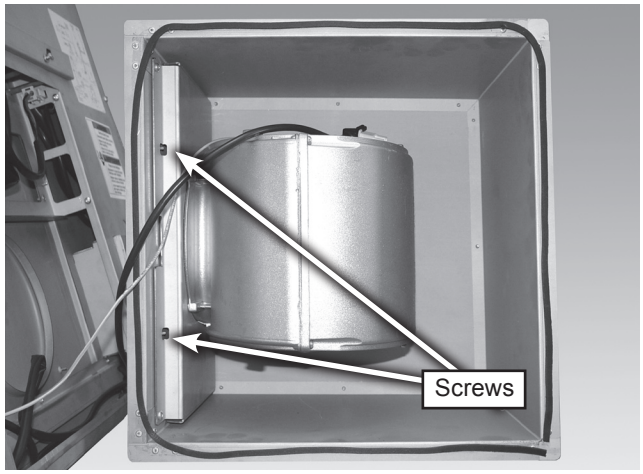
1. Unplug vent or disconnect power.
2. Remove the vent from cabinet (see page 3-6) for procedure.
3. Loosen or remove the two screws securing the retaining strap at the top of the Blower housing. The housing is designed to allow mounting the blower in any of 4 directions.



4. With the housing released from the retainer, it will “hinge” on the the lower support allowing it to swing down to access wiring and connections.



5. The motor is connected to the unit with a Molex type connector on the backside of the motor housing. The ground wire is connected by means of a self tapping screw into the motor casing.



6. The motor is mounted to a plate and the plate is mounted to the housing using two slots and tabs secured by two screws.

ELEVATOR MOTOR AND ELEVATOR SCREW REMOVAL

1. Raise retractable section to the up position.

⚠ WARNING

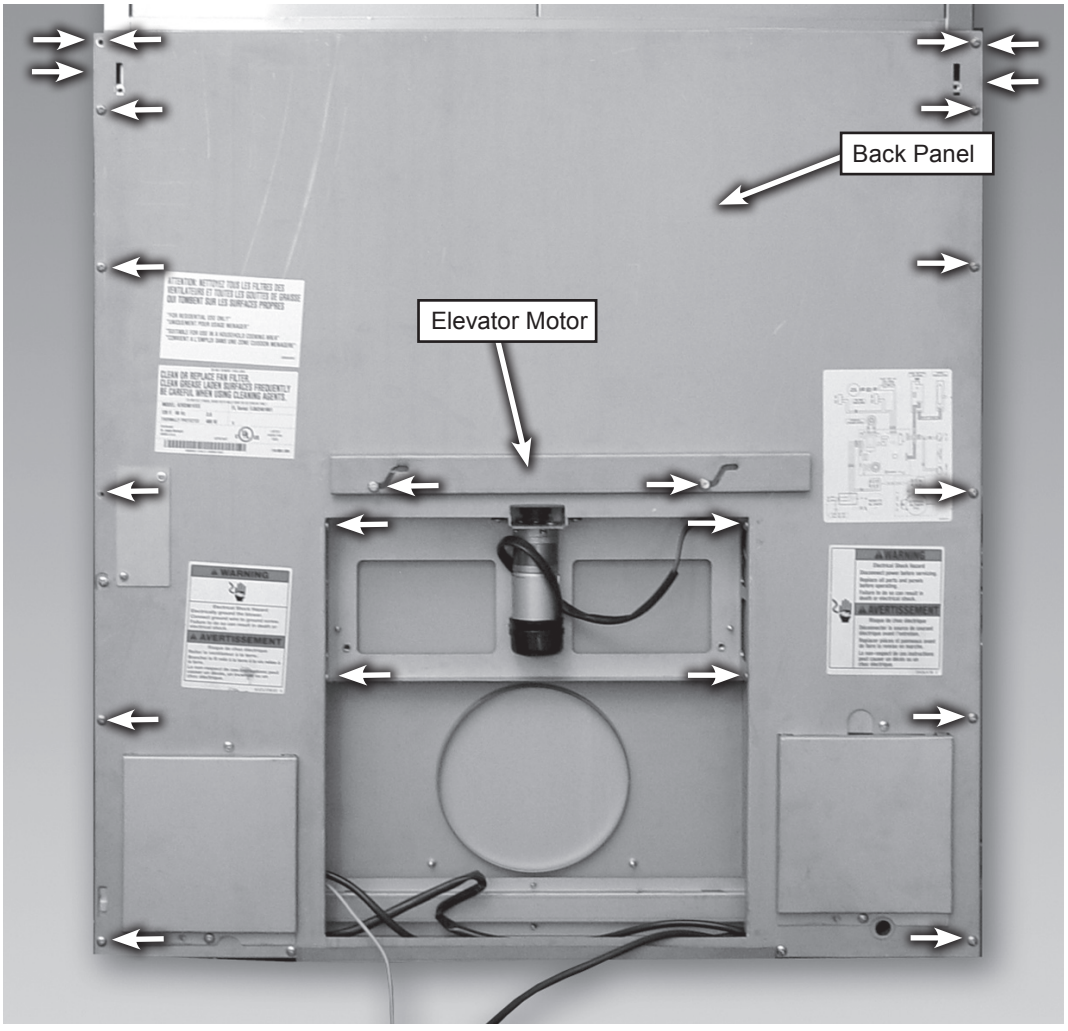
Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

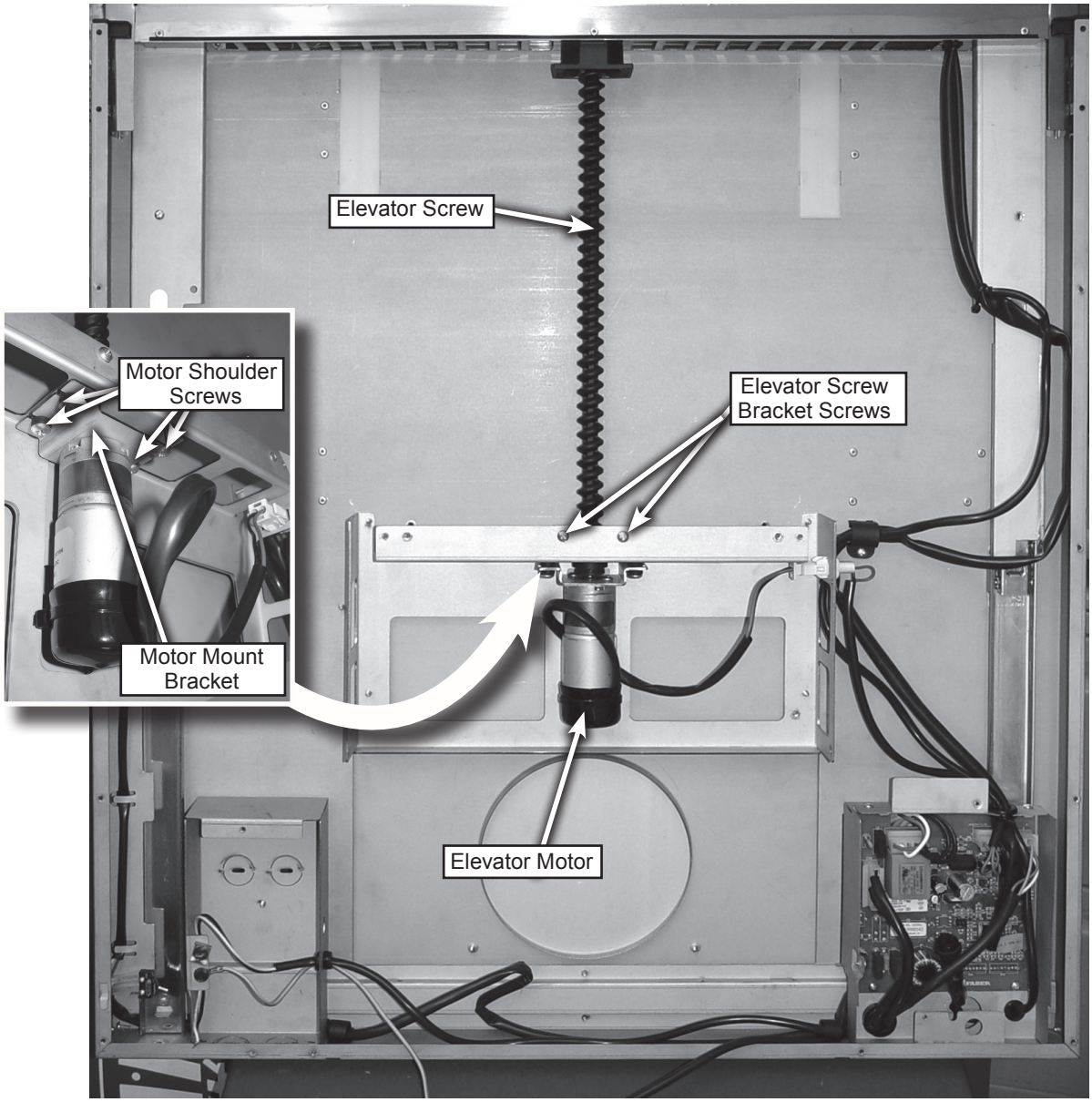
Failure to do so can result in death or electrical shock.

2. Unplug vent or disconnect power.
3. Remove the vent from cabinet (see page 3-6) for procedure.
4. Remove the blower housing and motor. (see page 3-7)
5. Remove all screws that secure the unit's back panel.



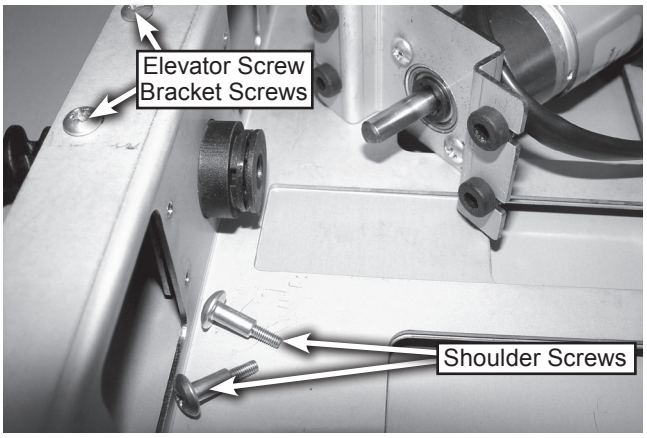
ELEVATOR MOTOR AND ELEVATOR SCREW REMOVAL (con't)

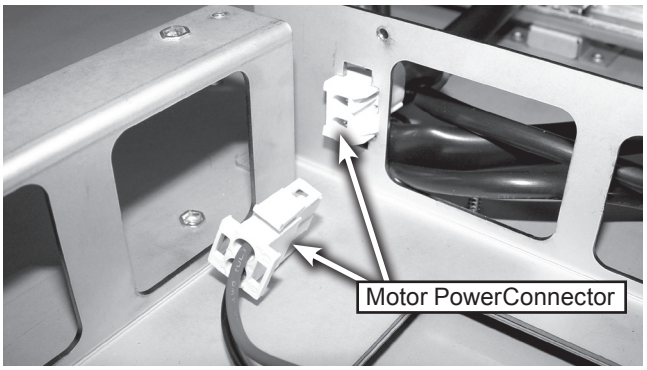
6. Grasp elevator screw and manually twist until the filter frame is as high as it will go.
7. Remove four shoulder screws that secures the motor to the motor mount bracket.

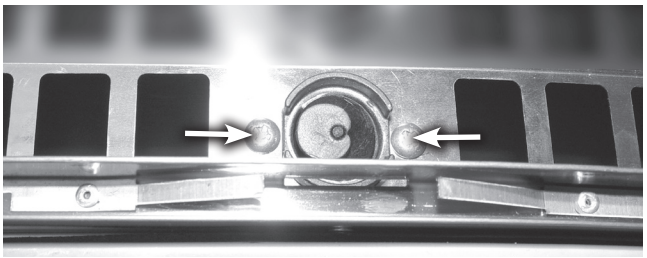


ELEVATOR MOTOR AND ELEVATOR SCREW REMOVAL (con't)

8. Pull the motor out of the bottom of the elevator screw coupling.
9. Disconnect the motor power cable from the connector mounted on the frame.
10. Remove the two screws that mount the lower elevator screw bracket
11. Manually twist the elevator screw until it is free of the bracket.

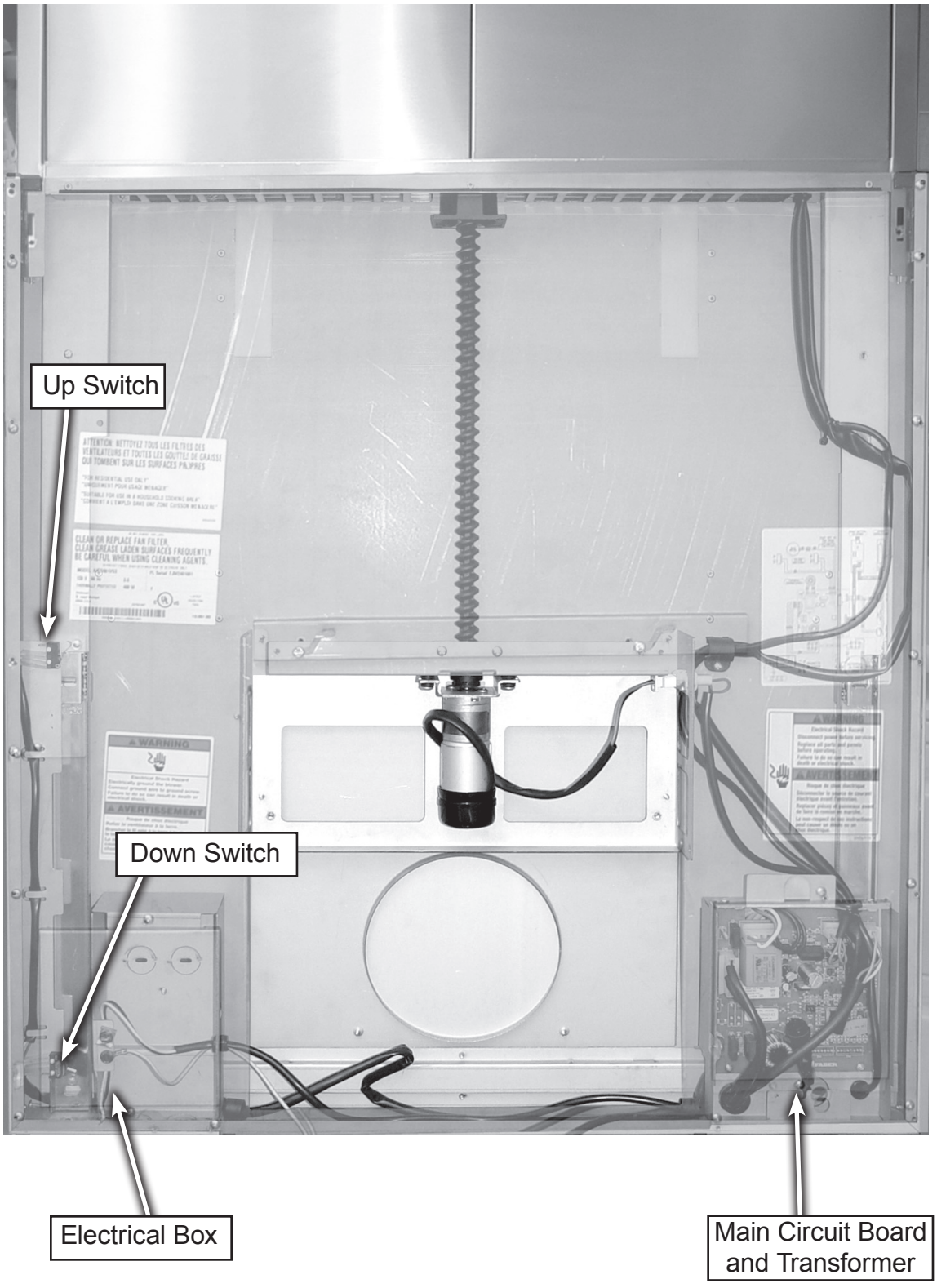




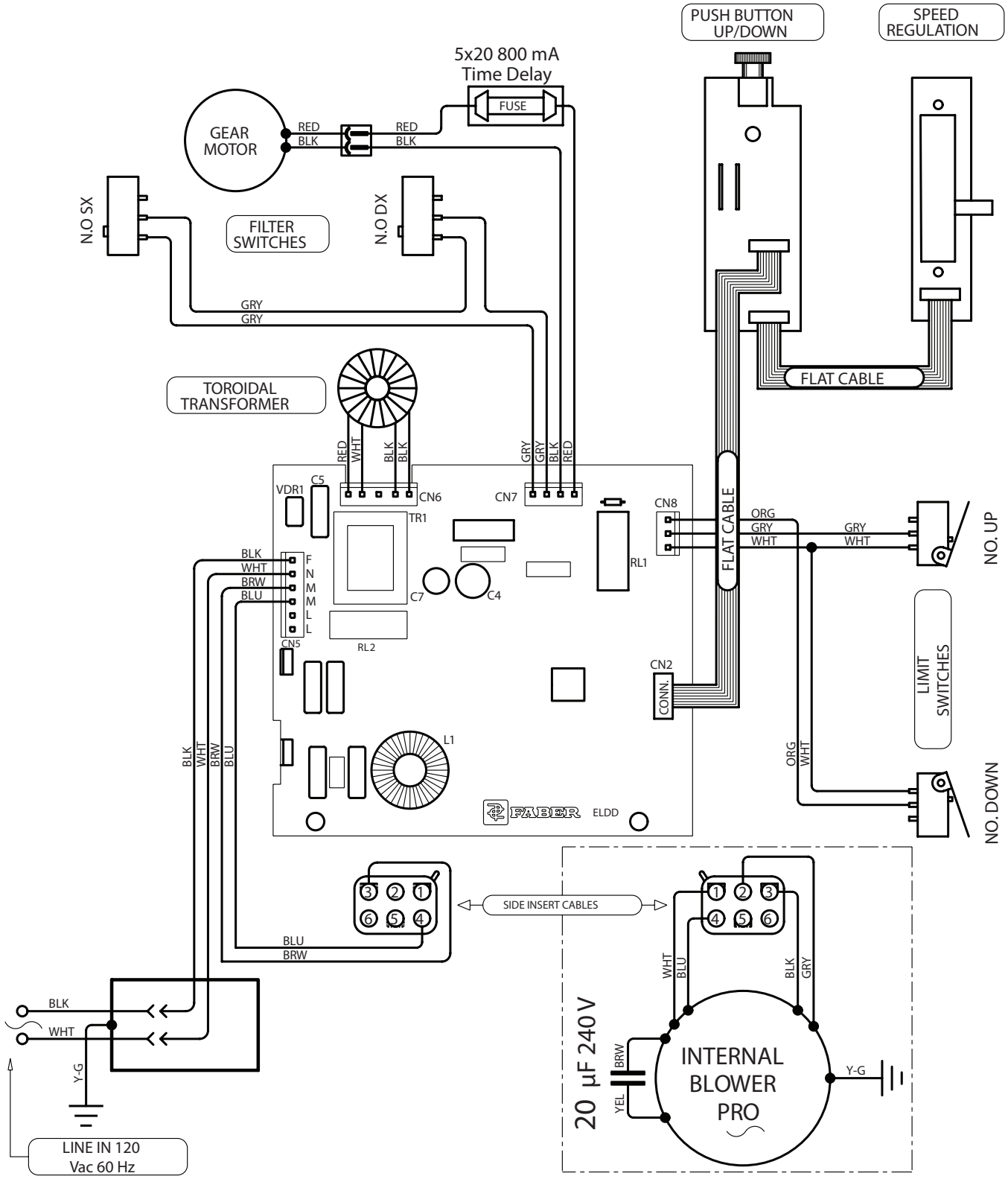


Upper elevator screw bracket viewed from inside the filter frame. The two screws shown secure the upper bracket.

UP AND DOWN SWITCHES AND PC BOARD LOCATIONS
(view is “x-ray” as if seen through the back panel)



WIRING DIAGRAM



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